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EXAMINER

CANTELMO, GREGG

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,119

Applicant(s)

VU ET AL.

Examiner

Gregg Cantelmo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 is/are allowed.
- 6) ☒ Claim(s) 16-18, 20-23, 25-41 and 43 is/are rejected.
- 7) ☒ Claim(s) 19, 24 and 42 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 01122004. 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-43 of this application. The scope of the provisional application does not appear to have sufficient disclosure to support the instant claims. Since the disclosures are not coextensive in scope, priority is not granted. For example the provisional application does not have disclosure for: a bypass airflow conduit and second conduit as recited in claim 1; a housing outlet in fluid communication with the housing inlet and wherein the air manager functions in the manner recited in claim 16; an air manager drawing air from the battery compartment and supply a first portion of the drawn air to the cell via the housing inlet and deliver a second

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portion of air to the battery compartment via an air manager outlet wherein the second portion of air does not enter the housing inlet (claim 25); the air manager and peristaltic air pump as recited in claim 28; delivering first and second air portions as recited in claim 33 and recirculating as recited in claim 34; an electrical device having a battery compartment to receive a battery cartridge shaped to fit the battery compartment while maintaining electrical communication with the load as recited in claim 38; the combination of claim 43 having an electrical device having an battery compartment as defined therein. Each independent claim has at least one limitation which is not adequately supported by the disclosure of the provisional application which the instant application is claiming priority to.

Information Disclosure Statement

3. The information disclosure statement received January 30, 2002 has been placed in the application file and the information referred to therein has been considered as to the merits.

Drawings

4. Formal drawings were received however these drawings are replete with errors, numerous examples of which are set forth below. Applicant is advised to carefully review the disclosure and drawings for consistency.

a. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: cartridge 28 (page 9, line 1) is not in the drawings.

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It may be that this should be cartridge "38". Note this further conflicts with reference character "28" as applied in Fig. 3 which is a shutter for a camera. Reference character "456" (page 12, line 5) is not in the drawings. It may be that reference character "56" in Fig. 4 should be "456". Reference character "262" (page 18, fourth line from the bottom of the page) is not found in Fig. 8. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

b. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: reference characters "30" in Fig. 3; "31" in Fig. 4; "68" in Fig. 5; "131", "136", "146", "152", "154", "156", "167" and "180" in Fig. 7; "220", "236", "241", "243", "250", "256", "231", "280", "270", "240", "258", "267", "264" and "272" in Fig. 8; "320", "336", "341", "343", "356", "331", "380", "370", "340", "358", "367", "364" and "372" are not found in the written description. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

c. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "420" in Fig. 6 has been used to designate both the current amplifier and proportional amplifier. It may be that reference character "420" to the proportional amplifier should be "426".

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Reference character "243" in Fig. 8 appears to be drawn to 2 distinct portions of the figure. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 33 is objected to because of the following informalities: the claim does not end in a period. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 18, 28-32, 34 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 18 recites the limitation "the pumping device" in line 2. There is insufficient antecedent basis for this limitation in the claim. This further applies to dependent claims 29-32;

b. Claim 28 recites the limitation "the housing inlet" in line 6. There is insufficient antecedent basis for this limitation in the claim. This further applies to dependent claims 29-32;

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- c. Claim 34 recites the limitation "the pump" in line 3. There is insufficient antecedent basis for this limitation in the claim;
- d. Claim 38 recites the limitation "the load" in line 3. There is insufficient antecedent basis for this limitation in the claim;
- e. The term "standard alkaline size" in claim 38 is a relative term which renders the claim indefinite. The term "standard" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Furthermore as advances are made in the art, standards are typically modified and changed. Absent a clear definition of what the instant application defines as "standard" in the specification, it is unclear to the exact extent of the term "standard".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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9. Claim 16, 17, 20-23, 25-27, 33 and 35-37 are rejected under 35

U.S.C. 102(e) as being anticipated U.S. patent No. 6,342,314 (Siemenski).

Siemenski discloses a battery housing and method of operating in Fig. 10 comprising a housing inlet and housing outlet in fluid communication with the housing inlet, a conduit defined by a gap between the cells 68 and the cell cavity, an air manager having an air mover 28 to supply air to the housing inlet, wherein a portion of the air travels axially to the outlet and another portion travels to deliver air to the cells (Fig. 10 as applied to claims 16, 25-27, and 33).

The first and second portions of air are exhausted through the outlet 26b (Fig. 10 as applied to claim 17).

The air mover can be disposed in a chamber (Fig. 9) and can be removed from the housing (as applied to claim 21).

The air mover 28 is a fan. The manner of operating the fan at variable speeds does not further define the structure of the air mover. Since the prior art air mover is a species of air movers shown in the instant application to be a suitable air mover and it is further known that fans are operable at any number of speeds, the prior art has the same structure of claims 20 and 22 and still anticipates the claim.

While intended use recitations and other types of functional language cannot be entirely disregarded. However, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended

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use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). See also MPEP § 2114.

The manner of operating the device does not differentiate an apparatus claim from the prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

The air mover comprises a fan 28 (Fig. 10 as applied to claim 23).

The central region of the chamber defined by the inlet and outlet constitutes a bypass conduit wherein at least a portion of air drawn through the cell will flow through the bypass conduit (Fig. 10 as applied to claim 35).

The air mover is turned on when an electrical demand is required from a load and the air mover (fan) moves at a speed sufficient to deliver oxygen to the housing and cell to meet the demand of the load (col. 4, ll. 23-36 as applied to claims 36 and 37).

10. Claim 43 is rejected under 35 U.S.C. 102(b) as anticipated by U.S. patent No. 4,913,983 (Cheiky).

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Cheiky discloses an electrical device in Fig. 1 comprising a battery compartment 10 which can be opened and closed (col. 4, ll. 9-35), an air depolarized power source including one or more cells 14, and an air mover 26 located within the compartment 10.

Although silent as to the amount of air present as recited in claim 43, the claim is drawn to an apparatus. The prior art has the same structural features as those set forth in claim 43, thus the prior art is held to anticipate the claimed invention.

While intended use recitations and other types of functional language cannot be entirely disregarded. However, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). See also MPEP § 2114.

The manner of operating the device does not differentiate an apparatus claim from the prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not

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differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siemenski in view of U.S. patent No. 4,997,731 (Machida).

Siemenski discloses a battery cartridge in Fig. 10 comprising a pair of depolarized cells 22, an air mover chamber (wherein lies fan 28) to supply air to the cells, the cells having terminals which are operable to engage terminals of the battery compartment of the load (Fig. 10 as applied to claims 38).

The term operable is not an express limitation and is not accorded patentable weight. The term only requires that the claim can operate in the manner recited therein, the term "operable" is not limiting thereto. Thus Siemenski has two cells in the casing, the cells having inherent positive and negative terminals which can be operated to engage the terminals of the battery compartment in order to effectively provide power to the electronic device.

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While intended use recitations and other types of functional language cannot be entirely disregarded. However, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). See also MPEP § 2114.

The manner of operating the device does not differentiate an apparatus claim from the prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

The cells are arranged in a side-by-side orientation (Figs. 8-10 as applied to claim 39).

The differences between claims 38, 40 and 41 and Siemenski are that Siemenski does not explicitly teach of the cartridge being adapted in shape to fit in to the battery compartment of the electrical device, of the compartment having

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a Figure 8 cross sectional orientation (claim 40) or having the size and shape of a pair of AA, AAA, AAAA, C and D sized alkaline cells (claim 41).

It is evident from the teachings of Siemenski that the cartridge disclosed therein is used in portable electronic devices (see Background of the Invention).

Machida teaches that a battery cartridge for storing two adjacent batteries can have a "Figure 8" shape and more particularly a size and shape of a pair of AA, AAA, AAAA, C and D sized alkaline cells (as applied to claims 40 and 41).

Such shapes are typically employed in portable electronic devices such as cameras (col. 1, ll. 10-20).

This design provides a shape which is adapted to fit in standard portable electronic devices such as cameras (as applied to claims 38-41).

The motivation for arranging the cartridge of Siemenski as taught by Machida is that it provides a compact battery pack for a portable electronic device. Thereby minimizing the space and weight requirements of the cartridge useful in portable electronic devices.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Siemenski by arranging the cartridge of Siemenski as taught by Machida since it would have provided a compact battery pack for a portable electronic device and minimized the space and weight requirements of the cartridge useful in portable electronic devices.

Allowable Subject Matter

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13. Claims 1-15 are allowed.

14. The following is an examiner's statement of reasons for allowance: none of the prior art of record appears to teach, fairly suggest, or render obvious the invention of claim 1. In particular of the housing recited therein having a first bypass airflow conduit extending through the housing and isolated from the cell and a second conduit defined by a gap between the cell and cell cavity, a housing inlet in fluid communication with the conduits and an air manager having an air mover configured to supply air to the inlet and conduits as recited in claim 1.

Cheiky discloses an air manager for a battery wherein separate air movers are provided to supply cooling air and reactant air to the batteries. Each air mover directing air across the cell in directions which are perpendicular to each other (see Fig. 1).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

15. Claims 18 and 34 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record appears to teach, fairly suggest, or render obvious the invention of these claims respectively.

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In particular of an apparatus (claim 18) and method of operating an air-depolarized cell (claim 34) wherein a first portion of the exhaust air is re-circulated within the battery compartment to the pumping device and a second portion of the exhaust air exits the battery compartment.

16. Claims 19, 24 and 42 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 19: none of the prior art of record appears to teach, fairly suggest, or render obvious the invention of this claim.

Siemenski does not teach or suggest of the conduit being radially offset from the housing inlet, and of the second portion of the air traveling radially outward towards an inlet to the conduit.

With respect to claim 24: none of the prior art of record appears to teach, fairly suggest, or render obvious the invention of this claim.

While Siemenski discloses of a flexible tubing at the inlet and outlet, there is no teaching or suggestion of the combination of the flexible tubing in claim 24 along with a rotatable pump head having protrusions extending therefrom configured to compress and depress the flexible tubing and a pump motor to rotate the pump head to drive air through the tubing and inlet.

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17. Claim 28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

With respect to claim 28: none of the prior art of record appears to teach, fairly suggest, or render obvious the invention of this claim.

The prior art of record teaches that air management of air-depolarized cells is known in the art. However the particular air manager of claim 28 is not taught or fairly suggested by the prior art of record. Therefore the air manager of claim 28 is deemed allowable. This applies to dependent claims 29-32, all of which are dependent upon claim 28.

With respect to claim 42: none of the prior art of record appears to teach, fairly suggest, or render obvious the invention of this claim.

Siemenski does not teach or suggest of a first and second conduit as recited therein, wherein the second conduit is isolated from the cells. Siemenski discusses of isolation passageways but teaches away from such an arrangement since it has a detrimental impact on humidity in the battery (col. 3, ll. 7-13).

Conclusion

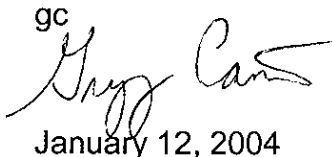
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by

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telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached at (571) 272-1292. FAX communications should be sent to FAX number: (703) 872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

Gregg Cantelmo
Patent Examiner
Art Unit 1745

gc

A handwritten signature in cursive script, appearing to read "Gregg Cantelmo".

January 12, 2004